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91 with spinal cord contusion injury or motor neuron degeneration causing reduction of locomotor function and neuromuscular strength, a therapeutically effective amount of at least one  $\beta_2$  adrenergic agonist to increase locomotor function and neuromuscular strength in the patient, wherein the effective amount of the  $\beta_2$  adrenergic agonist is from about 0.5 to about 100  $\mu\text{g}$  per kg of body weight.

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4. The method of claim 1, wherein the  $\beta_2$  adrenergic agonist comprises clenbuterol or a salt thereof.

5. The method of claim 1 wherein the  $\beta_2$  adrenergic agonist comprises salbutamol or a salt thereof.

92 6. The method of claim 37 wherein the effective amount of the  $\beta_2$  adrenergic agonist is from about 0.5 to about 1000  $\mu\text{g}$  per kg of body weight.

7. The method of claim 40 wherein the effective amount of clenbuterol is from about 0.5 to about 1000  $\mu\text{g}$  per kg of body weight.

8. The method of claim 41 wherein the effective amount of salbutamol is from about 0.5 to about 1000  $\mu\text{g}$  per kg of body weight.

9. The method of claim 40, wherein the effective amount of clenbuterol is greater than about 0.25 mg/day per kg body weight.

10. The method of claim 41, wherein the effective amount of salbutamol is

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cont  
greater than about 0.25 mg/day per kg body weight.

Please add the following new claims 37-43.

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37. A method of rehabilitation following spinal cord contusion injury to the lower thoracic spine, the method comprising administering to a mammalian patient with spinal cord contusion injury in the lower thoracic spine causing reduction of locomotor function and neuromuscular strength, a therapeutically effective amount of at least one  $\beta_2$  adrenergic agonist to increase locomotor function and neuromuscular strength in the patient

38. The method of claim 37, wherein the  $\beta_2$  adrenergic agonist is selected from the group consisting of salmeterol, ractopamine, cimaterol, BRL-47672, terbutaline, fenterol, memproterenol, isoprenline, MJ-9184-1, trimetoquinol, tetrahydropapaveroline, soterolol, salmefamol, rimiterol, QH-25, isoetharine, R-804, orciprenaline, quinterenol, sulfonterol, dobutamine, and isoproterenol and salts of the foregoing.

39. The method of claim 37 wherein the  $\beta_2$  adrenergic agonist is selected from the group consisting of salmeterol, ractopamine, cimaterol, BRL-47672, terbutaline, fenterol, memproterenol and isoprenline and salts of the foregoing.

40. The method of claim 37 wherein the  $\beta_2$  adrenergic agonist comprises clenbuterol or a salt thereof.

41. The method of claim 37 wherein the  $\beta_2$  adrenergic agonist comprises salbutamol or a salt thereof.